

Claims

1. Plug contact element for pushing through an opening (14), in particular a round opening, in an elastic material (16) along a push through direction (D) of the plug contact element, comprising a housing part (10) having at least two wall regions (20, 20', 20'', 20''') which are substantially planar and inclined with respect to one another at least at a front side (12) of the housing part (10) and which are connected to one another via an arched or bent connection region (22, 22', 22'', 22'''), and with the housing part (10) having at least one indentation (36, 36', 36'', 36''') which opens to a front side (12) of the housing part (10) which lies in the push through direction (D) and of which the indentation edge (38, 38', 38'', 38''') at least partly forms a front-side edge of the arched or bent connection region (22, 22', 22'', 22'''), with the indentation edge (38, 38', 38'', 38''') having an apex or a tangent (52, 52') which is orthogonal to the push through direction (D), the apex or tangent (52, 52') being provided only at the boundary between the connection region (22, 22', 22'', 22''') and one of the bordering wall regions (20, 20', 20'', 20''') or at one of the bordering wall regions (20, 20', 20'', 20''').

2. Plug contact element in accordance with claim 1, characterized in that, the indentation (36, 36', 36'', 36''') is formed asymmetrically in relation to a plane which bisects the angle between the wall regions (20, 20', 20'', 20''').

3. Plug contact element in accordance with claim 1 or claim 2, characterized in that, the indentation edge (38, 38', 38'', 38''') has substantially the form of a "V" on an at least partly arched surface.

4. Plug contact element in accordance with at least one of the preceding claims, characterized in that, the indentation edge (38, 38', 38'', 38''') extends substantially linearly at least in a section (40) on one of the wall

regions (20, 20', 20'', 20''') up to the arched or bent connection region (22, 22', 22'', 22''') and/or helically in the connection region (22, 22', 22'', 22''').

5. Plug contact element in accordance with claim 4, characterized in that, the linear section (40) of the indentation edge (38, 38', 38'', 38''') subtends an angle of between 10° and 45° to the push through direction (D).

6. Plug contact element in accordance with at least one of the preceding claims, characterized in that, the housing part (10) is a single piece bent part (48), in particular a stamped out bent part.

7. Plug contact element in accordance with at least one of the preceding claims, characterized in that, the housing part (10) has at least one bent around tongue (24, 24', 28, 28') which is connected to one of the wall regions (20, 20', 20'', 20''') at the front side (12) at which the indentation (36, 36', 36'', 36''') is formed.

8. Plug contact element in accordance with at least one of the preceding claims, characterized in that, it is formed as a socket element.

9. Plug contact element in accordance with at least one of the claims 1 to 7, characterized in that, it has a contact tongue (54) or a contact pin which is held at or in the housing part (10) or forms a section of the housing part (10).

10. Plug contact element in accordance with at least one of the preceding claims, characterized in that, the housing part (10) has four substantially planar wall regions (20, 20', 20'', 20''') at the front side (12), each of which subtends an angle which is smaller than 180° , preferably about 90° , with at least one of the others and is connected to the latter in each case via an

arched or bent connection region (22, 22', 22'', 22'''); and in that the housing part (10) has four indentations (36, 36', 36'', 36''') which open to the front side (12) of the housing part (10) which lies in the push through direction (D) and of which the indentation edge (38, 38', 38'', 38''') in each case at least partly forms a front-side edge of the arched or bent connection region (22, 22', 22'', 22'''), with the indentation edge (38, 38', 38'', 38''') in each case having an apex or a tangent (52, 52') which is orthogonal to the push through direction (D), the apex or tangent (52, 52') being provided only at the boundary between the bordering connection region (22, 22', 22'', 22''') and the wall region (20, 20', 20'', 20''') which borders on the latter or at the wall region (20, 20', 20'', 20''') which borders on the bordering connection region (22, 22', 22'', 22''').

11. Method for the manufacture of a housing part (10) for a plug contact element in accordance with at least one of the preceding claims, in which a sheet metal part (48) which is to be bent is prepared which has an indentation (36, 36', 36'', 36''') with an apex or rounded portion, and in which, for forming the housing part (10), the part to be bent is bent with two substantially planar wall sections which are inclined with respect to one another and which are connected over an arched or bent connection region (22, 22', 22'', 22''') along at least one line or one strip while forming the connection region (22, 22', 22'', 22''') in such a manner that the indentation edge (38, 38', 38'', 38''') has an apex or a tangent (52, 52') which extends orthogonally to the push through direction (D), the apex or tangent (52, 52') being provided only at the boundary between the connection region (22, 22', 22'', 22''') and one of the bordering wall regions (20, 20', 20'', 20''') or at one of the bordering wall regions (20, 20', 20'', 20''').

12. Method in accordance with claim 11, characterized in that, the indentation (36, 36', 36'', 36''') is formed asymmetrically in the sheet metal part (48) which is to be bent.

13. Method in accordance with claim 11 or claim 12, characterized in that, the indentation (36, 36', 36'', 36''') in the sheet metal part (48) which is to be bent is substantially V-shaped.

14. Method in accordance with at least one of the claims 11 to 13, characterized in that, the indentation (36, 36', 36'', 36''') in the sheet metal part (48) which is to be bent has a linear edge section (40); and in that the bending takes place in the region of the linear edge section (40).

15. Method in accordance with at least one of the claims 11 to 14, characterized in that, the sheet metal part (48) which is to be bent is stamped out of sheet metal.